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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,688	11/25/2003	Ronald L. Hall	200206298-1	6165

22879 7590 09/20/2007  
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FORT COLLINS, CO 80527-2400

EXAMINER
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DANG, DUY M

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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09/20/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/721,688	Applicant(s) HALL ET AL.	
	Examiner Duy M. Dang	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/25/07</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Invention of Group I, claims 1-17 and 21-24 in the reply filed on July 6, 2007 is acknowledged. The traversal is on the ground(s) that there is no serious burden on the examiner. Upon further consideration, it is noted that claimed "color and monochrome" is recited in both Inventions of Groups I-II. Therefore, the restriction has been withdrawn and claims 1-29 are examined on the merits in this Office action..

### ***Drawings***

2. Drawing filed on 7/6/07 has been approved by the examiner.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation of "allocating the identified monochrome type pixel data to the red data channel" in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: there is no clear support or antecedent basis in the description for the recitation "allocating the identified monochrome type pixel data to the red data channel" in claim 5.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 11-17, and 22-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 11-17, these claims are directed to "a computer readable medium having a set of executable instructions." Normally, these claims are considered statutory. However, the instant specification states "Memory 104 can include ROM and/or RAM...optically read media, among others." at page 7 lines 3-6. The "optically read media" is broadly understood and interpreted as "paper" so such paper or optically read media having a set of executable instructions is considered non-statutory subject matter because paper cannot be

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employed as a computer component and thus does not impart any functionality. Suggestion to delete such paper from the specification would overcome this rejection.

Regarding claims 22-24, these claims are directed to computer executable instruction which is interpreted as computer program. Since computer program is considered non-statutory subject matter unless it is stored on the computer readable storage memory, claims 22-24 are considered to be directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 11, 14, 18-19, 21-23, and 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasaki et al. (USPN 4,682,216).

Regarding claim 1, Sasaki teaches a method for processing data (see figure 2), comprising: defining a number of color channels (see RGB inputted to 21 of figure 2: note that each of RGB refers to a color channel so there are 3 color channels for 3 colors R, G, and B), each channel to transfer a particular color element of a stream of color type pixel data (see RGB inputted to 21 of figure 2: note that each of RGB refers to a color channel so there are 3 color channels for 3 colors R, G, and B. Each color channel i.e., R, is used to transfer R color); identifying monochrome type pixel data within a data stream (see RGB, CMY, CMYBK, and/or BK. Each of these refers to claimed “monochrome type pixel data”. This interpretation is consistent with applicant’s disclosed specification page 2 lines 20-30); and allocating a color

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channel to transfer the identified monochrome type pixel data (see BK depicted in figure 2: note a color channel is allocated to transfer BK data).

Regarding claim 2, Sasaki further teaches wherein the number of color channels equals a number of colors available on a device (see figure 2. Note that 3 colors RGB and 3 channels for transferring 3 colors R, G, and B; and/or 4 channels for transferring 4 colors C, M, Y, and BK).

Regarding claim 3, Sasaki further teaches wherein more than one color channel is allocated to transfer the identified monochrome type pixel data (see figure 2: note that 3 color channels i.e., output of converter 21, are used to generate and transfer BK by circuit 22).

Regarding claim 4, Sasaki further teaches wherein defining a number of color channels includes defining a red data channel, a green data channel, and a blue data channel (see RGB inputted to 21 of figure 2: note that each of RGB refers to a color channel so there are 3 color channels for 3 colors R, G, and B).

Regarding claim 11, it is noted that this claim recites the limitation of a computer readable medium having a set of executable instructions for causing a device to perform a method steps called for in claim 1. Thus, the rejection of claim 1 above is incorporated herein. Sasaki further teaches using software and microcomputer to realize his/her invention as described at column 4 lines 52-53 and column 6 lines 6-7. It is noted that microcomputer inherently includes memory or the so-called "computer readable medium" in order for the software or the so-called "set of executable instruction" to be stored thereon. Therefore, the combination of software and microcomputer utilized in Sasaki corresponds to the so called "a computer readable medium having a set of executable instructions."

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Regarding claim 14, Sasaki further teaches wherein the method further comprises processing color type pixel data, transferred through the number of color channels, with a processing module along a color channel (see converter 21, circuits 22, 26-27 of figure 2).

The advanced statement as applied to claim 1 above is incorporated herein. Sasaki further teaches claimed features as additional required by claim 18 as follows: an application specific integrated circuit (see figure 2) having a color pipeline to transfer monochrome and color type pixel data (i.e., the representation in figure 2 refers to the so called "color pipeline" because colors RGB are pipeline-processed from item 21 to item 6; the BK or monochrome is transferred from item 21 to item 6; and colors RGB are transferred from item 21 to item 6); a channel in the color pipeline to transfer both monochrome type pixel data and color type pixel data (see figure 2: note channel used to transfer BK data. This BK data includes color type pixel data, see equation shown at column 4 lines 45-47, and therefore such transferring BK in Sasaki does include transferring color type pixel data); a number of processing modules connected to the color pipeline (see figure 2. Note that all items connected to converter 21 either directly or indirectly refer to the so called "a number of processing modules"), wherein at least one of the processing modules processes the monochrome type pixel data (see items 22-24 and 26 of figure 2) and wherein at least one of the processing modules processes color type pixel data (see items 21-22, 24, and 26-27 of figure 2).

Regarding claim 19, Sasaki further including a processing module to process both monochrome type and the color type pixel data (see figure 2 which is a representative of image processor depicted at 4 of figure 1).

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Regarding claim 21, this claim is also rejected for the same reasons as set forth in claim 1 above.

Regarding claim 22-23, this claim is also rejected for the same reasons as set forth in claim 11 above.

Regarding claim 25, the advanced statement as applied to claim 21 above is incorporated herein. Sasaki further teaches destination device (see items 6-7 of figure 1).

Regarding claim 26, Sasaki teaches wherein the processing unit can receive at least one of the number of types of pixel data (see RGB inputted to converter 21 of processor 4 of figure 1 and detailed in figure 2) and wherein the processing unit can be set to process the number of types of pixel data based upon identification of the type of pixel data to be received by the processing unit (see figure 2: note that RGB are identified and converted into CMY and BK).

Regarding claim 27, Sasaki further teaches the system further includes a memory for storing processed data received from the pipeline (see recording medium at column 3 lines 33-44).

Regarding claim 28, wherein the destination device includes a display to receive and display processed pixel data. (see recording medium at column 3 lines 33-44. Note that the recording medium refers to claimed "display").

Regarding claim 29, Sasaki further teaches wherein the destination device includes a printer to receive and print processed pixel data (see "printing" at column 3 lines 42-43).

9. Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Vondran, Jr. et al. (USPN 5,915,079, referred as Vondran hereinafter).



***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4-10, 12-13, 15-17, 20, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki.

The advanced statements as applied to claims 1-4, 11, 14, 18-19, 21-23, and 24-29 with regard to Sasaki above are incorporated hereinafter. While Sasaki fails to explicitly teach the claimed features as recited in claims 4-10, 12-13, 15-17, 20, and 24, such claimed features are well known and widely used in the art (Office Notice). Using such well know features would represent a design choice and/or simplifying hardware required. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use well know features in combination with Sasaki for that reasons.

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M. Dang whose telephone number is 571-272-7389. The examiner can normally be reached on Monday to Friday from 6:00AM to 2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dmd  
9/07



**DUY M. DANG**  
**PRIMARY EXAMINER**